The Nearctic Species of Nitela, with a Description of a New Species of Solierella (Sphecidae: Hymenoptera).

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It was not until Rohwer in 1923 described *Nitela virginiensis* that it was known this genus was represented in the Nearctic fauna. Recent examination of material at the United States National Museum has revealed the presence of another indubitably discrete species which is described herewith.

Nitela floridana sp. nov.

♀. 4-4.5 mm. long. Black. Head and pro- and mesonotum nigroaenaeruginosous; pleura and abdomen black nitidous. Clypeus apically, mandibles, palpi, antennae (flagellum infuscated apically), tegulae, and all the legs fulvous. Abdominal sternites fuscous apically.

Wings with the nervures testaceous, stigma fuscous. Forewing with the submarginal cell subrectangular, twice as long as broad.

Head opaque, microscopically shagreened; clypeus sharply tuberculate discally, rounded out and nitidously subbevelate medioapically; malar space very short, compound eyes almost reaching the base of the mandibles; eyes converging somewhat above; ocelli arranged in a high subequilateral triangle, the ocellocular line about one-third the postocellar line; the scapal basins on the front broadly and shallowly excavate; temples shining, with fine scattered punctures.

Thorax with the pronotum, mesonotum and scutellum opaque and microscopically shagreened; pronotum slightly wrinkled transversely, not carinate anteriorly, dorsal surface wide, the length about one-half the ocular line. Mesonotum without either foveate triangular impressions laterally or a fan of rugulae medioapically, subfoveolate there at most. Pleurae shining, subshagreened. Propodeum dorsally with numerous rather regular longitudinal carinulae; posterior face shining, with transverse rugulae, no cuneate enclosure but merely a longitudinal elliptical sulcus medially; lateral faces shining, with a few longitudinal rugulae.

Abdomen shining, impunctate, no pygidial area.

♂ unknown.

Holotype. ♀, Orange County, FLORIDA. March 9, 1930 (N. W. Knowles) [United States National Museum, Catalogue No. 50487].

Paratypes. FLORIDA ♀, Duval County, April 17, 1930 (R. S. Thomas) [U. S. N. M.]; 2 ♀ ♀, Hillsboro County, January 25, 1930 and March 1, 1930 (B. P. Moora) [U. S. N. M.;] ♀, Citrus County, March 12, 1930 (V. H. Robinson) [U. S. N. M.]; ♀, Volusia County, March 8, 1930 (P. A. Ausley, Jr.) [U. S. N. M]. All the material was taken by the Florida Fruit Fly Trap Survey.

Since the description of *virginiensis* a number of specimens of this species have come to hand which give an idea of the range of the species. These data are consquently recorded below together with several additional characters not given by Rohwer in his original description.

NITELA VIRGINIENSIS Rohwer.

1923. *Nitela virginiensis* Rohwer, Proc. Ent. Soc. Wash. XXV: 100; ♀.

The mesonotum has laterally on each side a triangular foveate depression; the malar space is broad, fully one-half the length of the scape; and the posterior face of the propodeum has a broad cuneate enclosure.

Distribution. VIRGINIA ♀, Chain Bridge, September 18, 1921 (J. R. Malloch) [U. S. N. M. Cat. No. 25846]; GEORGIA, 2 ♀ ♀, Milner (Tanglefoot Trap Posts), June 26, 1933 (T. L. Bissell) [U. S. N. M.]; FLORIDA, 1 ♀, Orange County (Florida Fruit Fly Trap Survey), June 12, 1929 (C. Nelson) [U. S. N. M.]; 1 ♀, Orlando, "In nests of Ants," June 15, 1908 (H. M. Russell) [U. S. N. M.]; NEW JERSEY, 1 ♀, Palisades, "Nest in dead tree", September 12, 1920 (Jos. Bequaert) [Cornell University]; NEW YORK, 1 ♀, Ithaca, July 13, 1925 (P. P. Babiy) [C. U.]

The known Nearctic species may be readily distinguished by the following key. As yet no males are known but they should be separable upon the characters given below.

Pronotum transversely carinate; mesonotum laterally on each side with a triangular foveate depression; submarginal cell rhomboidal; legs black ....*virginiensis* Rohwer.

Pronotum rounded anteriorly, not transversely carinate; mesonotum without lateral foveate impressions; submarginal cell rectangular, twice as long as broad; legs fulvous ....*floridana* sp. nov.

Nothing definite is known of the ethology of the American species of *Nitela*. A specimen of *virginiensis* caught by Dr. Bequaert at Palisades, New Jersey, bears the notation "nest in dead tree"; while a specimen of the same species taken by H. M. Russell at Orlando, Florida, has a label "in nests of ants." Dr. Harold Morrison of the Bureau of Entomology has very kindly supplied from its files the information that the latter specimen was collected on pecan twig and that the ant associated with it was *Crematogaster lineolata* (det. Pergande). Probably this association was a purely adventitious one. The European species construct their nests in the stems of briars or in the deserted galleries of wood boring insects and provision the nests with aphids.

Solierella (Silaon) mirificus sp. nov.

♂. 5 mm. long. Black; the mandibles whitish yellow, the apices red; antennae with the scape fulvopiceous, pedicel fulvous, flagellar segments one to seven whitish yellow, segments four to six piceous beneath, segments eight to ten piceous, apical segment fulvopiceous; an elongate transverse spot laterally on each side of the pronotum, posterior margins of the pronotal tubercles, the tegulae and axillary sclerites, the postscutellum, the tarsi, all the tibiae externally, greater part of the fore femora save basally above, middle femora apically and beneath, whitish-yellow. Head, thorax and abdomen with short appressed silvery pubescence.

Wings clear hyaline, nervures piceous. In the fore wing the basal and transverse median nervures are interstitial and the first recurrent is received by the first submarginal cell. In the hind wing, there are three longitudinal fuscous bands, the first along the anterior margin from the proximal end of the hamuli to the apex, the second and third starting from the transverse cubital nervure and running to the margin following the course of the marginal and cubital nervures respectively.

Head opaque, with fine close puncturation. Clypeus medio-apically produced, the produced portion tumid discally and obtusely tridentate apically, discally with a low, polished longitudinal ridge which becomes a sharp keel between the bases of the antennae, becoming weaker above and terminating dorsally in the apex of the V-shaped upper portion of the front which is thus formed by the deeply excavate antennal fossae; a shallow furrow from the anterior ocellus to the apex of the V-shaped upper portion of the front; a low polished ridge dorsally along the inner margins of the compound eyes. Antennae with flagellar segments one to three short and subequal, cylindrical, segments four to six becoming increasingly longer and almost square in cross section and with an increasingly longer spine apically beneath, that of the sixth over half as long as the seventh segment, seventh segment subcubical and longer than the sixth, eighth, ninth and tenth segments subcylindrical and progressively shorter, the apical segment long and tapering, fully as long as the four preceding segments, and with a deep longitudinal sulcus above.

Thorax opaque, finely punctate like the head, metapleura and lateral faces of the propodeum glabrous and shining, the latter with fine longitudinal striae; triangular area of the dorsal face of the propodeum glabrous and with a fan of fine wrinkles radiating from the posterior border of the postscutellum; posterior face of the propodeum with a deep shining perpendicular median sulcus. Anterior coxae deeply and roundly excavate internally; each anterior trochanter with a strong incurved hair.

Abdomen subshining, with fine puncturation; moderately constricted between the first and second segments; hypopygium with a subquadrate emargination apically.

♀ unknown.

Holotype: 1 ♂, 30 miles east of Quijotoa, Pima County, ARIZONA, 28-29 August, 1927 (J. C. Bradley) [Cornell University, Type No. 1320].

This species belongs to the *chilensis*-group and is apparently most closely related to *S. lucidus* Rohwer but may be readily distinguished from that species as well as any others of the group by the singular structure of the antennae and the anterior coxae and the pattern of the hind wing.